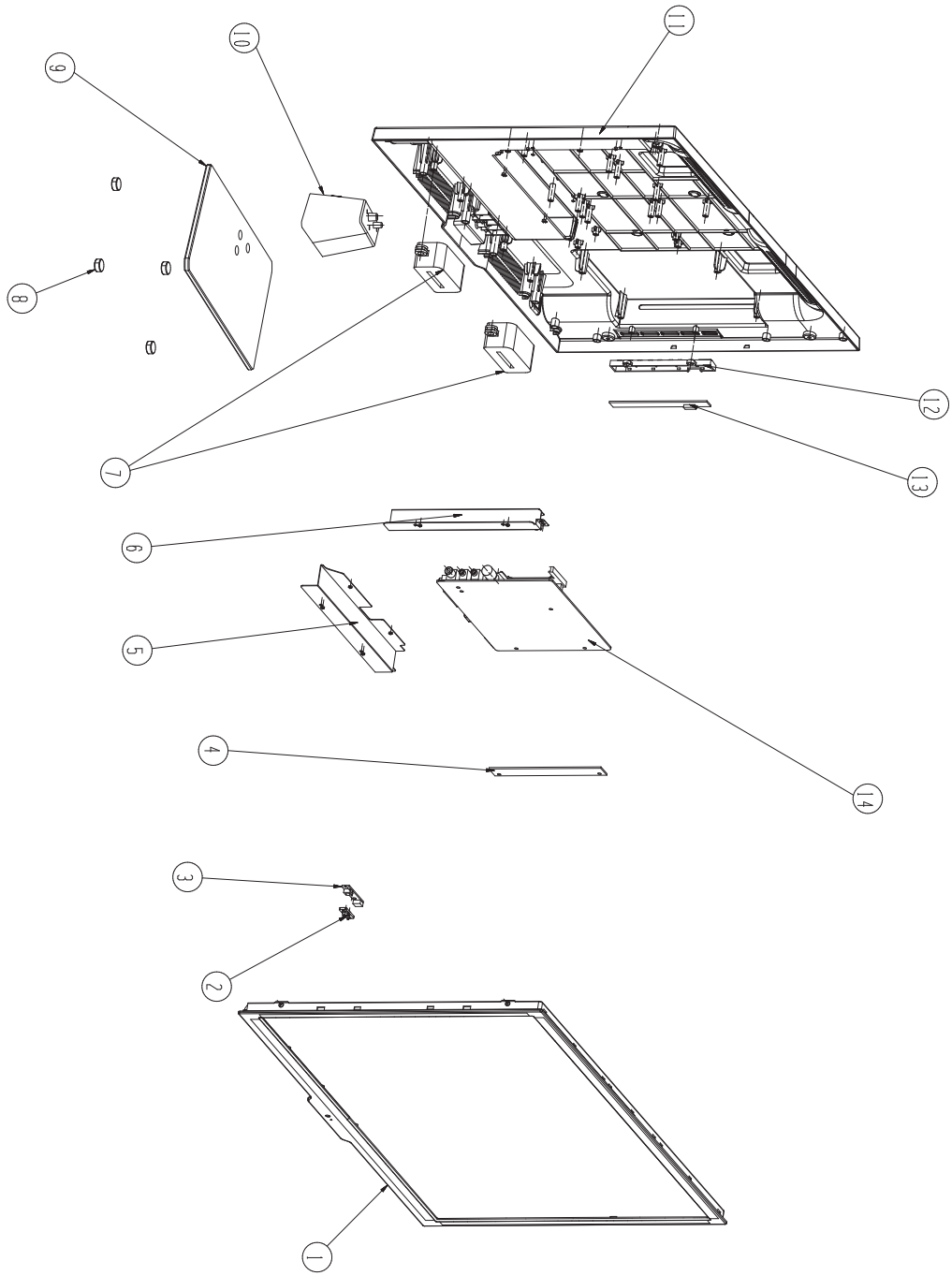
mytv

LED COLOR TV
Service Manual

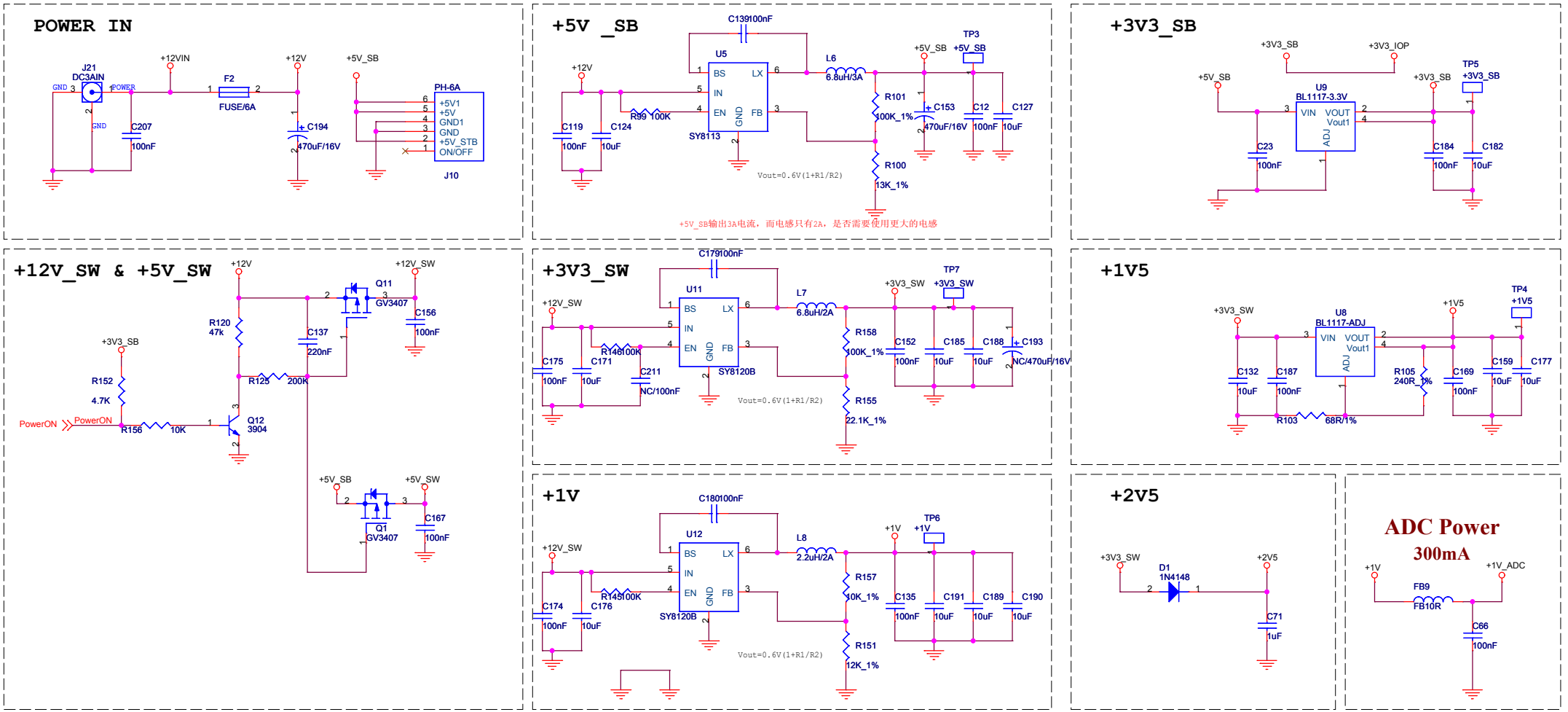
Model No.: TLH19

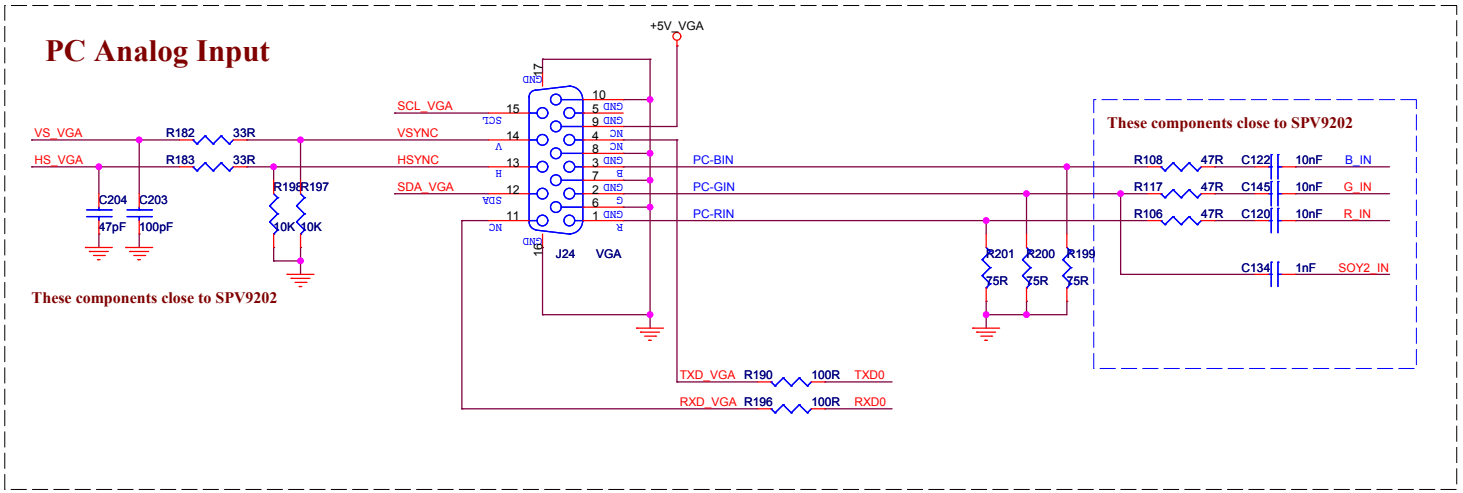
Exploded view and mechanical parts list

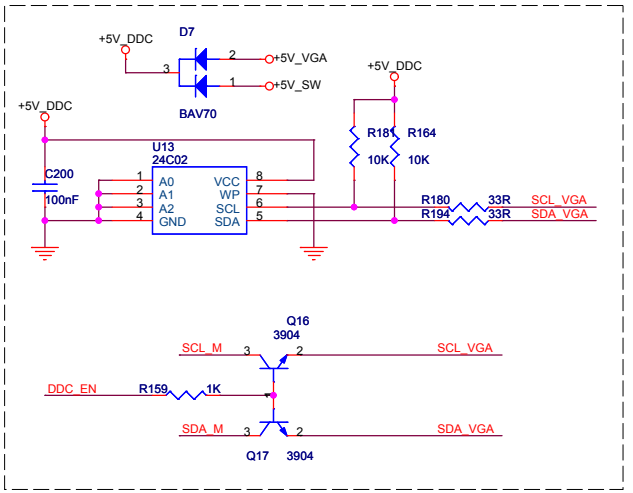


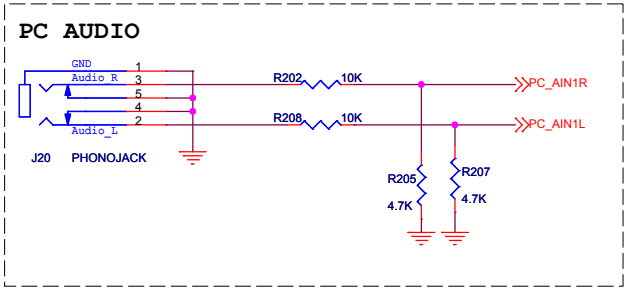
NO.	Part Name	QTY
1	PANEL MODULE	1
2	LAMP LENS	1
3	TV REMOTE ASS'Y	1
4	INVERTER	1
5	TERMINAL BASE	1
6	TERMINAL BASE	1
7	SPEAKER	2
8	RUBBER PAD CORD	4
9	GLASS BASE	1
10	DISPLAY BRACKET	1
11	TV CAB BLACK	1
12	FUNCTION KEY ASS'Y	1
13	TV CONTROL KEY PCB ASS'Y	1
14	DRIVE PCB	1

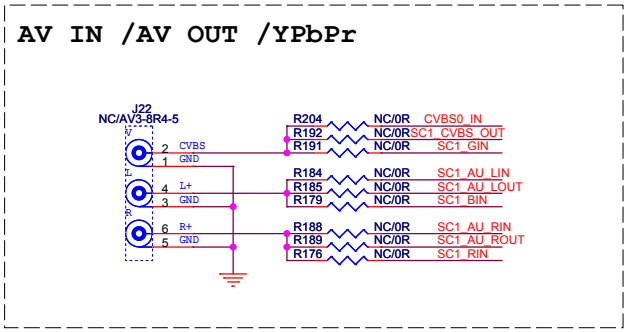
Driver PCB Principle Diagram

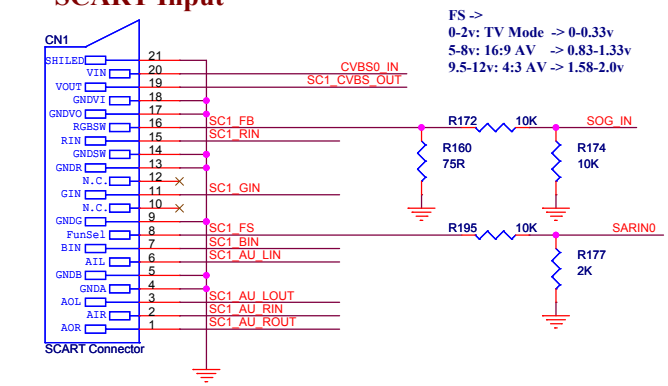

POWER IN
J21
DC3AIN
+12VIN
F2
FUSE/6A
+12V
C207
100nF
C194
470uF/16V
+5V_SB
PH-6A
+5V1
+5V
GND1
GND
+5V_STB
ON/OFF
J10
+5V _SB
C139100nF
U5
BS
LX
IN
EN
GND
FB
SY8113
L6
6.8uH/3A
TP3
R101
100K_1%
C153
470uF/16V
C12
100nF
C127
10uF
R100
13K_1%
C119
100nF
C124
10uF
R99 100K
Vout=0.6V(1+R1/R2)
+5V_SB输出3A电流，而电感只有2A，是否需要使用更大的电感
+3V3_SB
+3V3_IOP
TP5
U9
BL1117-3.3V
VIN
VOUT
Vout1
ADJ
C23
100nF
C184
100nF
C182
10uF
+12V_SW & +5V_SW
Q11
GV3407
R120
47k
C137
220nF
C156
100nF
R152
4.7K
PowerON
R156
10K
R125
200K
Q12
3904
Q1
GV3407
C167
100nF
+3V3_SW
C179100nF
L7
6.8uH/2A
TP7
R158
100K_1%
C152
100nF
C185
10uF
C188
10uF
C193
NC/470uF/16V
R155
22.1K_1%
C175
100nF
C171
10uF
C211
NC/100nF
R148100K
+1V5
TP4
C132
10uF
C187
100nF
R105
240R_1%
C169
100nF
C159
10uF
C177
10uF
R103
68R/1%
+1V
C180100nF
L8
2.2uH/2A
TP6
R157
10K_1%
C135
100nF
C191
10uF
C189
10uF
C190
10uF
R151
12K_1%
C174
100nF
C176
10uF
+2V5
D1
1N4148
C71
1uF
ADC Power
300mA
+1V_ADC
FB9
FB10R
C66
100nF

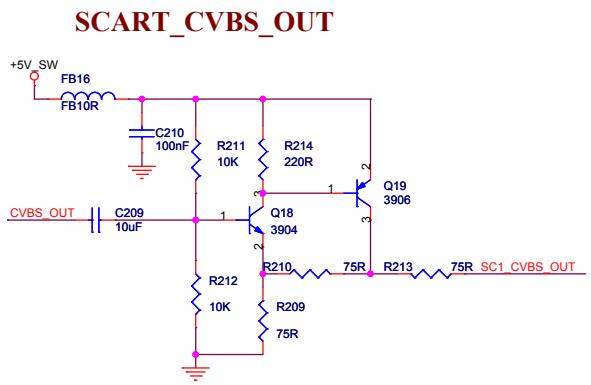


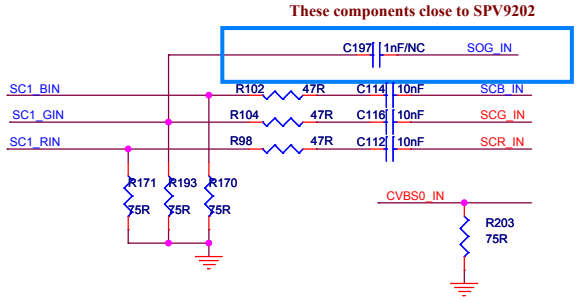


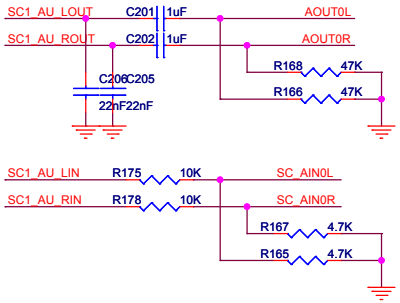




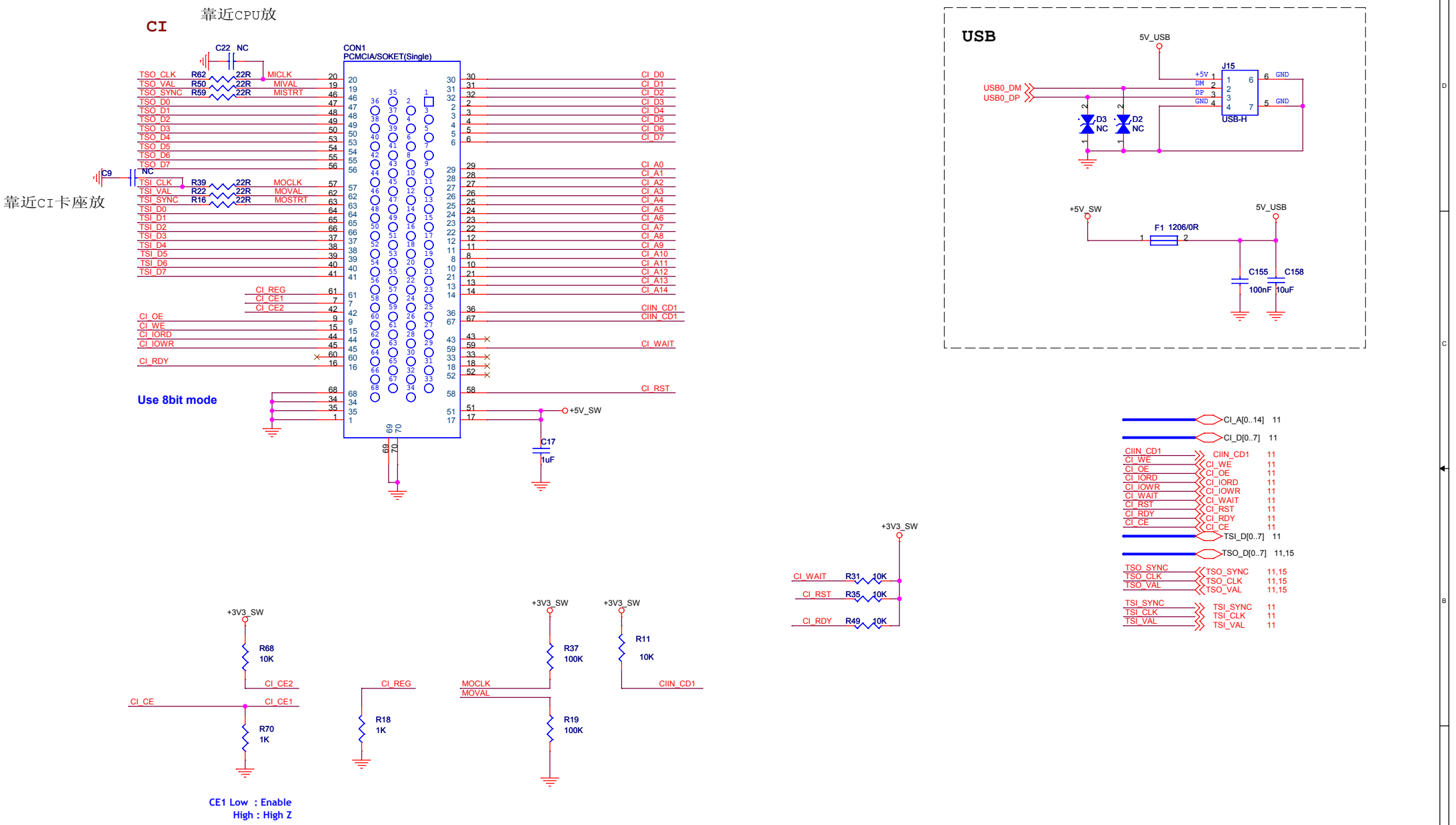


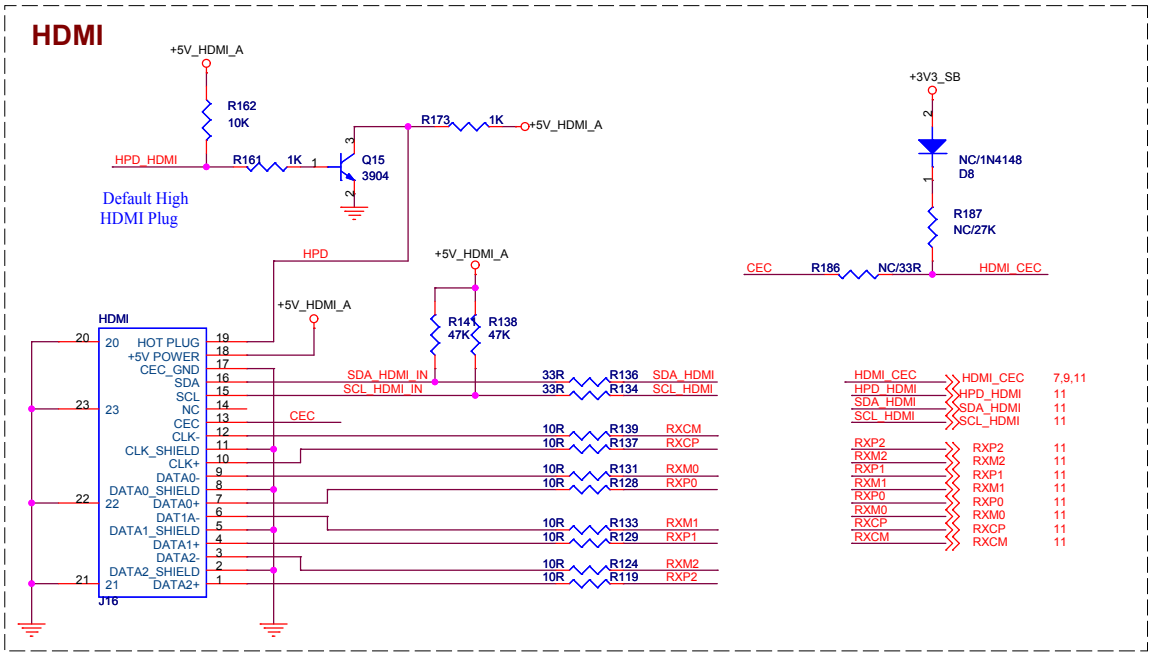


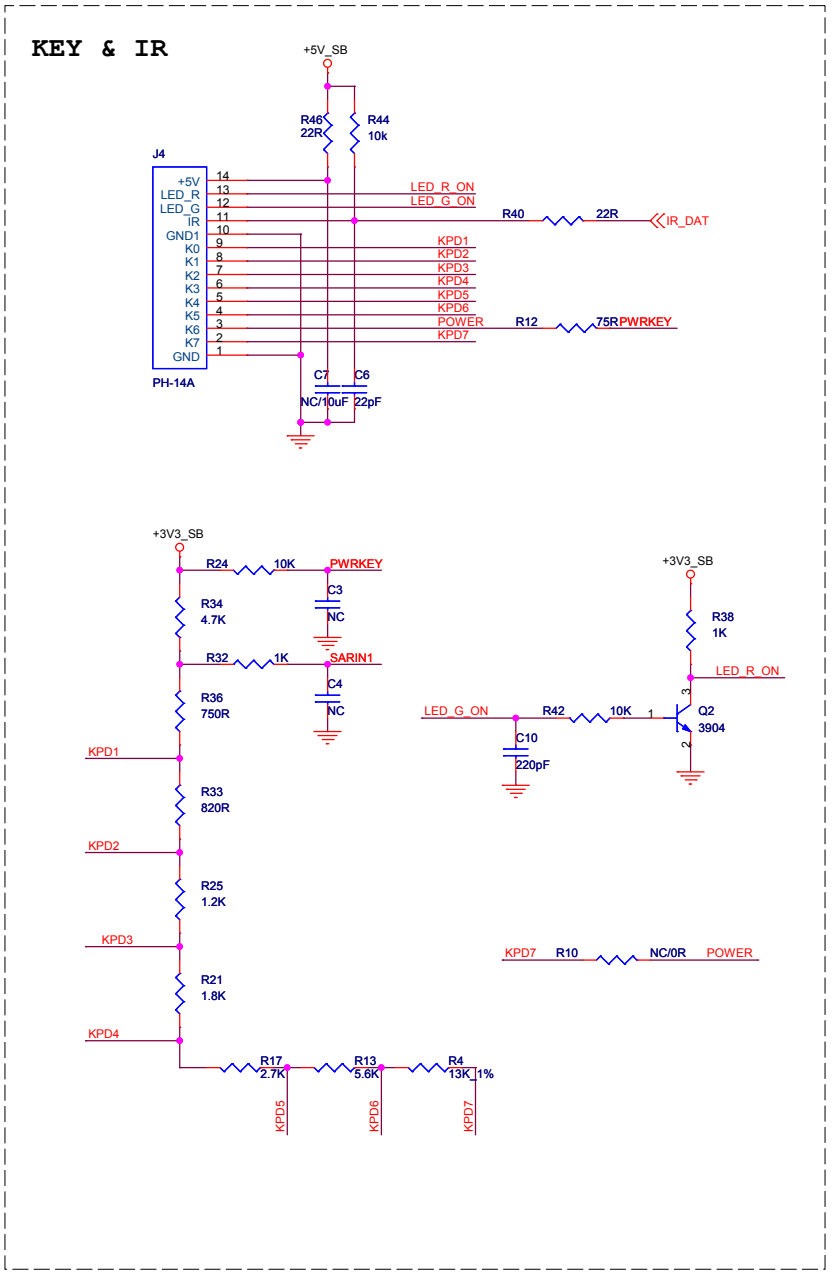


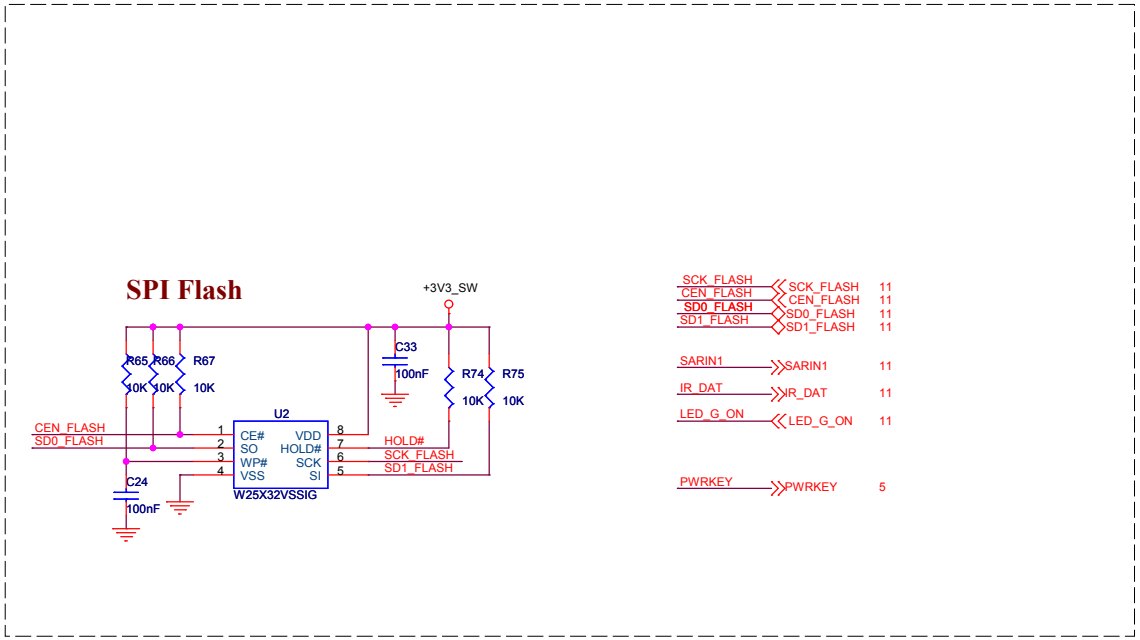


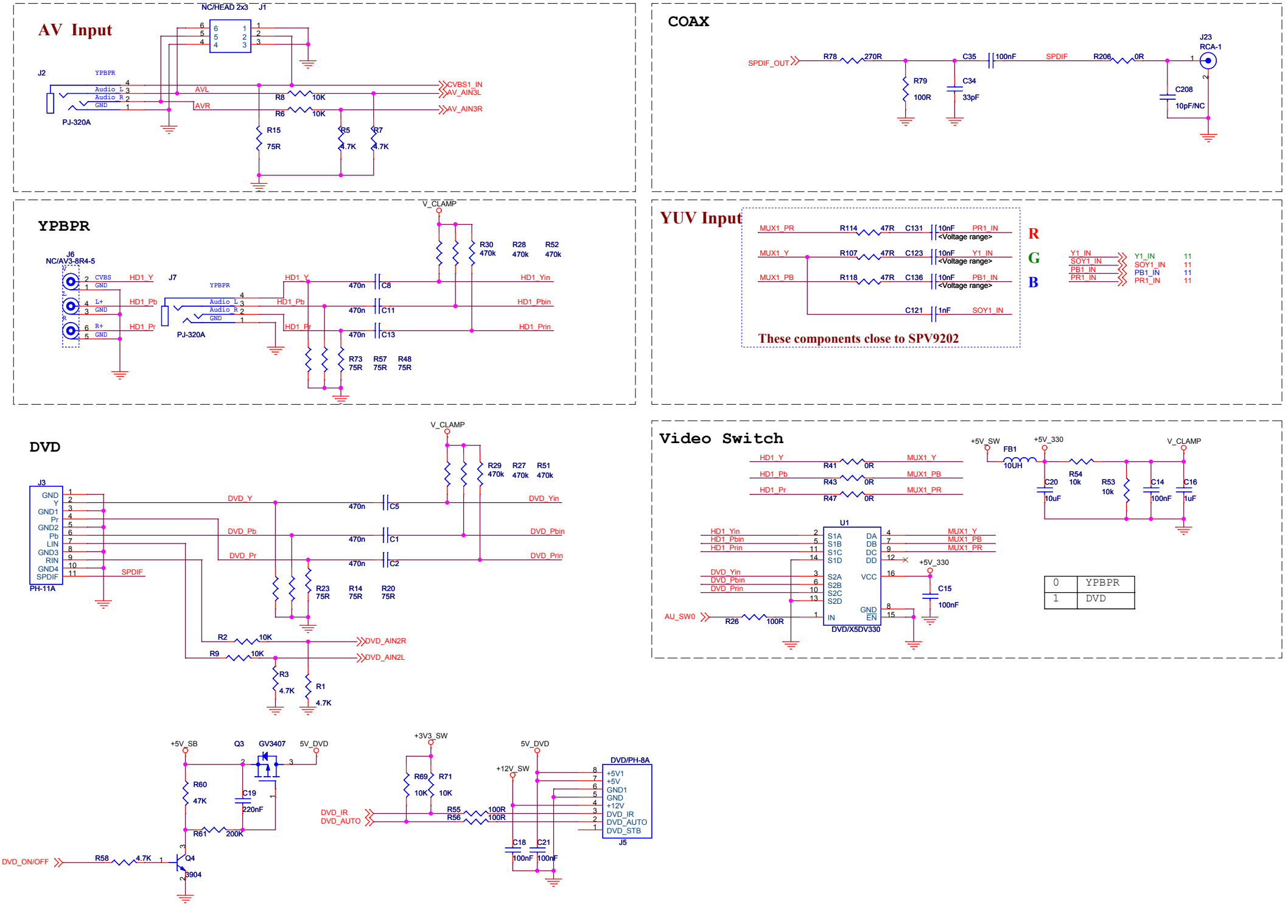
DDC_EN	DDC_EN	7,9,11
SCL_M	SCL_M	7,9,11
SDA_M	SDA_M	7,9,11
CVBS_OUT	CVBS_OUT	11
SC_AIN0R	SC_AIN0R	8
SC_AIN0L	SC_AIN0L	8
AOUT0L	AOUT0L	11
AOUT0R	AOUT0R	11
SARIN0	SARIN0	11
SOG_IN	SOG_IN	11
B_IN	B_IN	11
G_IN	G_IN	11
R_IN	R_IN	11
VS_VGA	VS_VGA	11
HS_VGA	HS_VGA	11
TXD0	TXD0	7,9,11
RXD0	RXD0	7,9,11
SOY2_IN	SOY2_IN	7,9,11
SCB_IN	SCB_IN	7,9,11
SCG_IN	SCG_IN	11
SCR_IN	SCR_IN	11
CVBS0_IN	CVBS0_IN	7,9,11

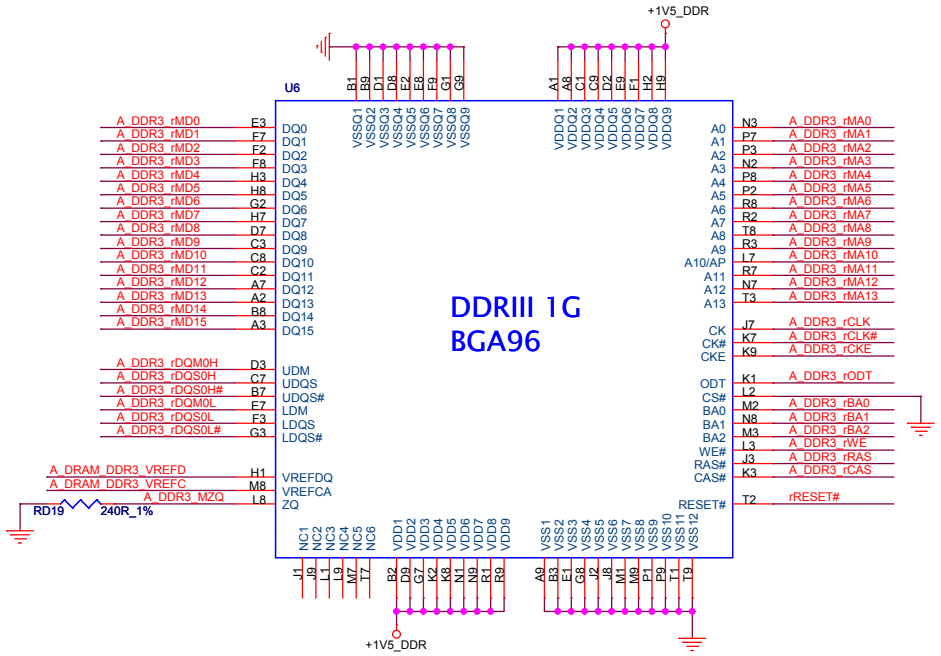

CI
靠近CPU放
靠近CI卡座放
C22 NC
CON1
PCMCIA/SOKET(Single)
TSO_CLK R62 22R MICLK
TSO_VAL R50 22R MIVAL
TSO_SYNC R59 22R MISTRT
C9 NC
TSI_CLK R39 22R MOCLK
TSI_VAL R22 22R MOVAL
TSI_SYNC R16 22R MOSTRT
CI_REG
CI_CE1
CI_CE2
CI_OE
CI_WE
CI_IORD
CI_IOWR
CI_RDY
CI_D0
CI_D1
CI_D2
CI_D3
CI_D4
CI_D5
CI_D6
CI_D7
CI_A0
CI_A1
CI_A2
CI_A3
CI_A4
CI_A5
CI_A6
CI_A7
CI_A8
CI_A9
CI_A10
CI_A11
CI_A12
CI_A13
CI_A14
CIIN_CD1
CIIN_CD1
CI_WAIT
CI_RST
+5V_SW
C17
1uF
Use 8bit mode
USB
5V_USB
USB0_DM
USB0_DP
J15
USB-H
D3 NC
D2 NC
+5V_SW
F1 1206/0R
C155 100nF
C158 10uF
+3V3_SW
R68 10K
CI_CE2
CI_CE
CI_CE1
R70 1K
CI_REG
R18 1K
MOCLK
MOVAL
R37 100K
R19 100K
R11 10K
CIIN_CD1
CI_WAIT R31 10K
CI_RST R35 10K
CI_RDY R49 10K
CE1 Low : Enable
High : High Z
CI_A[0..14] 11
CI_D[0..7] 11
CIIN_CD1 11
CI_WE 11
CI_OE 11
CI_IORD 11
CI_IOWR 11
CI_WAIT 11
CI_RST 11
CI_RDY 11
CI_CE 11
TSI_D[0..7] 11
TSO_D[0..7] 11,15
TSO_SYNC 11,15
TSO_CLK 11,15
TSO_VAL 11,15
TSI_SYNC 11
TSI_CLK 11
TSI_VAL 11


HDMI
+5V_HDMI_A
R162
10K
HPD_HDMI
R161
1K
Q15
3904
R173
1K
+5V_HDMI_A
Default High
HDMI Plug
HPD
+5V_HDMI_A
R141
47K
R138
47K
+3V3_SB
NC/1N4148
D8
R187
NC/27K
CEC
R186
NC/33R
HDMI_CEC
HDMI
HOT PLUG
+5V POWER
CEC_GND
SDA
SCL
NC
CEC
CLK-
CLK_SHIELD
CLK+
DATA0-
DATA0_SHIELD
DATA0+
DAT1A-
DATA1_SHIELD
DATA1+
DATA2-
DATA2_SHIELD
DATA2+
J16
SDA_HDMI_IN
SCL_HDMI_IN
R136 SDA_HDMI
R134 SCL_HDMI
R139 RXCM
R137 RXCP
R131 RXM0
R128 RXP0
R133 RXM1
R129 RXP1
R124 RXM2
R119 RXP2
HDMI_CEC 7,9,11
HPD_HDMI 11
SDA_HDMI 11
SCL_HDMI 11
RXP2 11
RXM2 11
RXP1 11
RXM1 11
RXP0 11
RXM0 11
RXCP 11
RXCM 11

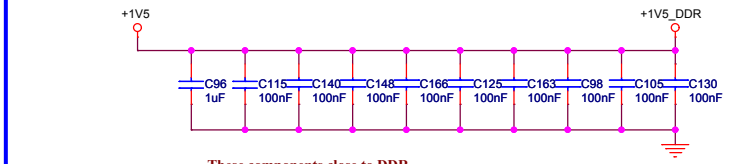

KEY & IR
+5V_SB
R46
22R
R44
10k
J4
+5V
LED_R
LED_G
IR
GND1
K0
K1
K2
K3
K4
K5
K6
K7
GND
PH-14A
LED_R_ON
LED_G_ON
R40
22R
IR_DAT
KPD1
KPD2
KPD3
KPD4
KPD5
KPD6
POWER
KPD7
R12
75R
PWRKEY
C7
NC/10uF
C6
22pF
+3V3_SB
R24
10K
PWRKEY
R34
4.7K
C3
NC
R32
1K
SARIN1
C4
NC
R36
750R
KPD1
R33
820R
KPD2
R25
1.2K
KPD3
R21
1.8K
KPD4
R17
2.7K
R13
5.6K
R4
13K_1%
KPD5
KPD6
KPD7
+3V3_SB
R38
1K
LED_R_ON
LED_G_ON
R42
10K
Q2
3904
C10
220pF
KPD7
R10
NC/0R
POWER


SPI Flash
+3V3_SW
R65
10K
R66
10K
R67
10K
C33
100nF
R74
10K
R75
10K
U2
CE#
SO
WP#
VSS
VDD
HOLD#
SCK
SI
W25X32VSSIG
CEN_FLASH
SD0_FLASH
HOLD#
SCK_FLASH
SD1_FLASH
C24
100nF
SCK_FLASH 11
CEN_FLASH 11
SD0_FLASH 11
SD1_FLASH 11
SARIN1 11
IR_DAT 11
LED_G_ON 11
PWRKEY 5

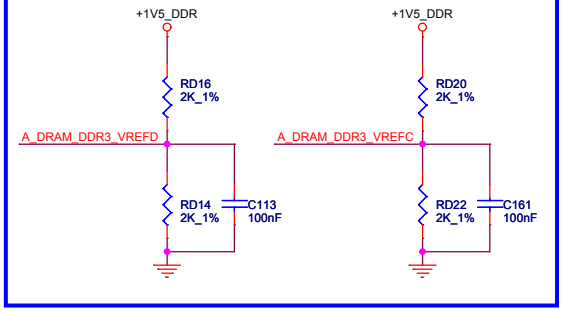

AV Input
NC/HEAD 2x3
J1
J2
YPBPR
Audio_L
Audio_R
GND
PJ-320A
AVL
AVR
R8 10K
R6 10K
R15 75R
R5 4.7K
R7 4.7K
CVBS1_IN
AV_AIN3L
AV_AIN3R
COAX
SPDIF_OUT
R78 270R
C35 100nF
SPDIF
R206 0R
J23
RCA-1
R79 100R
C34 33pF
C208 10pF/NC
YPBPR
V_CLAMP
J6
NC/AV3-8R4-5
CVBS
HD1_Y
L+
HD1_Pb
R+
HD1_Pr
J7
R30 470k
R28 470k
R52 470k
C8 470n
C11 470n
C13 470n
HD1_Yin
HD1_Pbin
HD1_Prin
R73 75R
R57 75R
R48 75R
YUV Input
MUX1_PR
MUX1_Y
MUX1_PB
R114 47R
R107 47R
R118 47R
C131 10nF
C123 10nF
C136 10nF
C121 1nF
PR1_IN
Y1_IN
PB1_IN
SOY1_IN
<Voltage range>
These components close to SPV9202
R
G
B
DVD
J3
PH-11A
DVD_Y
DVD_Pb
DVD_Pr
SPDIF
R29 470k
R27 470k
R51 470k
C5 470n
C1 470n
C2 470n
DVD_Yin
DVD_Pbin
DVD_Prin
R23 75R
R14 75R
R20 75R
R2 10K
R9 10K
R3 4.7K
R1 4.7K
DVD_AIN2R
DVD_AIN2L
Video Switch
HD1_Y
HD1_Pb
HD1_Pr
R41 0R
R43 0R
R47 0R
MUX1_Y
MUX1_PB
MUX1_PR
+5V_SW
FB1
10UH
+5V_330
C20 10uF
R54 10k
R53 10k
C14 100nF
C16 1uF
U1
S1A
S1B
S1C
S1D
S2A
S2B
S2C
S2D
DA
DB
DC
DD
VCC
GND
EN
IN
DVD/X5DV330
C15 100nF
AU_SW0
R26 100R
0 YPBPR
1 DVD
+5V_SB
Q3
GV3407
5V_DVD
R60 47K
C19 220nF
R61 200K
DVD_ON/OFF
R58 4.7K
Q4
3904
+3V3_SW
R69 10K
R71 10K
DVD_IR
DVD_AUTO
R55 100R
R56 100R
+12V_SW
C18 100nF
C21 100nF
DVD/PH-8A
+5V1
+5V
GND1
GND
+12V
DVD_IR
DVD_AUTO
DVD_STB
J5

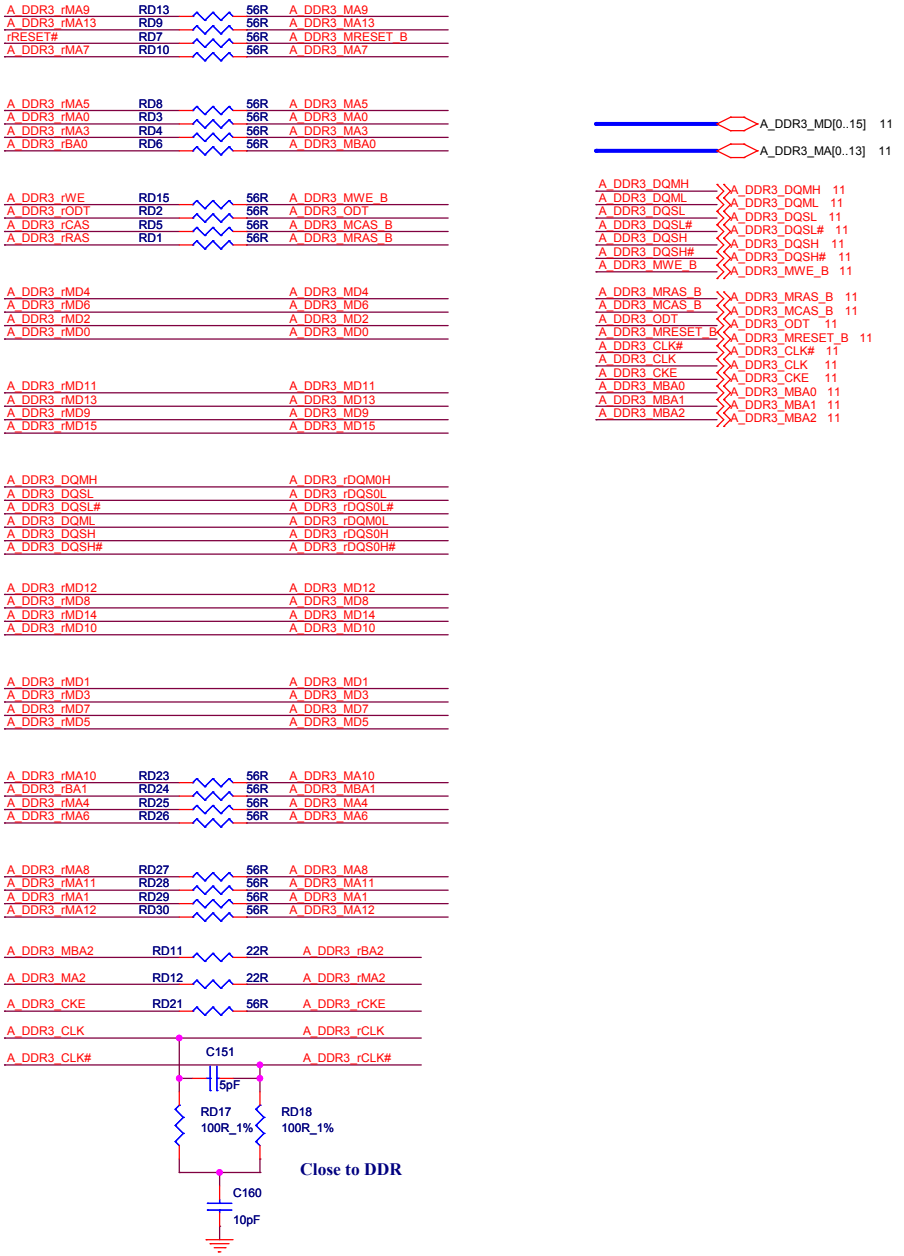


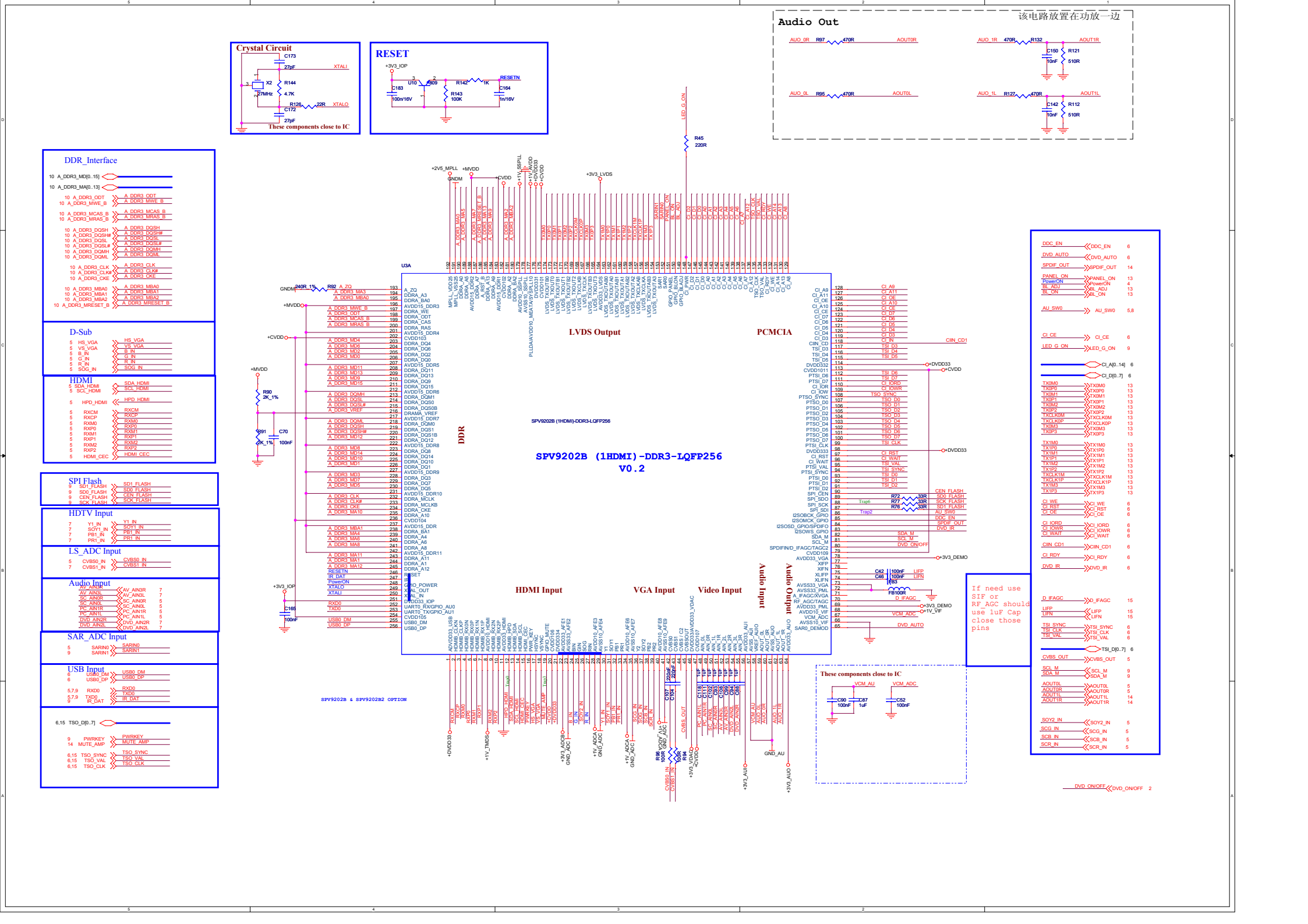
SOURCE POWER/GND (1.5V)



Power bypass cap. for VREF

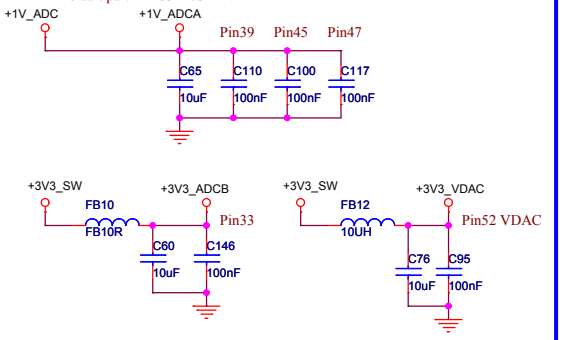





Crystal Circuit
C173
27pF
XTALI
X2
27MHz
R144
4.7K
R126
22R
XTALO
C172
27pF
These components close to IC
RESET
+3V3_IOP
U10
R809
R142
1K
RESETN
C183
100n/16V
R143
100K
C164
1n/16V
Audio Out
该电路放置在功放一边
AUO_0R
R97
470R
AOUT0R
AUO_1R
470R
R132
AOUT1R
C150
10nF
R121
510R
AUO_0L
R95
470R
AOUT0L
AUO_1L
R127
470R
AOUT1L
C142
10nF
R112
510R
DDR_Interface
A_DDR3_MD[0..15]
A_DDR3_MA[0..13]
A_DDR3_ODT
A_DDR3_MWE_B
A_DDR3_MCAS_B
A_DDR3_MRAS_B
A_DDR3_DQSH
A_DDR3_DQSH#
A_DDR3_DQSL
A_DDR3_DQSL#
A_DDR3_DQMH
A_DDR3_DQML
A_DDR3_CLK
A_DDR3_CLK#
A_DDR3_CKE
A_DDR3_MBA0
A_DDR3_MBA1
A_DDR3_MBA2
A_DDR3_MRESET_B
D-Sub
HS_VGA
VS_VGA
B_IN
G_IN
R_IN
SOG_IN
HDMI
SDA_HDMI
SCL_HDMI
HPD_HDMI
RXCM
RXCP
RXM0
RXP0
RXM1
RXP1
RXM2
RXP2
HDMI_CEC
SPI Flash
SD1_FLASH
SD0_FLASH
CEN_FLASH
SCK_FLASH
HDTV Input
Y1_IN
SOY1_IN
PB1_IN
PR1_IN
LS_ADC Input
CVBS0_IN
CVBS1_IN
Audio Input
AV_AIN3R
AV_AIN3L
SC_AIN0R
SC_AIN0L
PC_AIN1R
PC_AIN1L
DVD_AIN2R
DVD_AIN2L
SAR_ADC Input
SARIN0
SARIN1
USB Input
USB0_DM
USB0_DP
RXD0
TXD0
IR_DAT
TSO_D[0..7]
PWRKEY
MUTE_AMP
TSO_SYNC
TSO_VAL
TSO_CLK
U3A
DDR
LVDS Output
PCMCIA
HDMI Input
VGA Input
Video Input
Audio Input
Audio Output
SPV9202B (1HDMI)-DDR3-LQFP256
SPV9202B (1HDMI)-DDR3-LQFP256
V0.2
SPV9202B & SPV9202B2 OPTION
R45
220R
LED_G_ON
R90
2K_1%
R91
2K_1%
C70
100nF
R92
240R_1%
C165
100nF
R72
R77
R76
33R
C42
C46
100nF
FB100R
D_IFAGC
VCM_ADC
DVD_AUTO
These components close to IC
C90
100nF
C87
1uF
C52
100nF
If need use SIF or RF_AGC should use 1uF Cap close those pins
CI_A[0..14]
CI_D[0..7]
DDC_EN
DVD_AUTO
SPDIF_OUT
PANEL_ON
PowerON
BL_ADJ
BL_ON
AU_SW0
CI_CE
LED_G_ON
TX0M0
TX0P0
TX0M1
TX0P1
TX0M2
TX0P2
TXCLK0M
TXCLK0P
TX0M3
TX0P3
TX1M0
TX1P0
TX1M1
TX1P1
TX1M2
TX1P2
TXCLK1M
TXCLK1P
TX1M3
TX1P3
CI_WE
CI_RST
CI_OE
CI_IORD
CI_IOWR
CI_WAIT
CIIN_CD1
CI_RDY
DVD_IR
D_IFAGC
LIFP
LIFN
TSI_SYNC
TSI_CLK
TSI_VAL
TSI_D[0..7]
CVBS_OUT
SCL_M
SDA_M
AOUT0L
AOUT0R
AOUT1L
AOUT1R
SOY2_IN
SCG_IN
SCB_IN
SCR_IN
DVD_ON/OFF

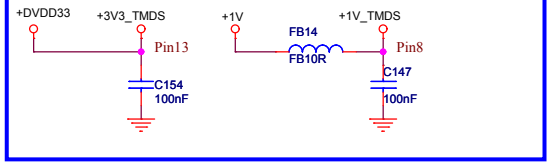
ADC POWER/GND (1.0V/3.3V)

FB for ADC need Rdc<0.015 , Z=120/100MHz Idc>3A
Default part MHC3216S121W

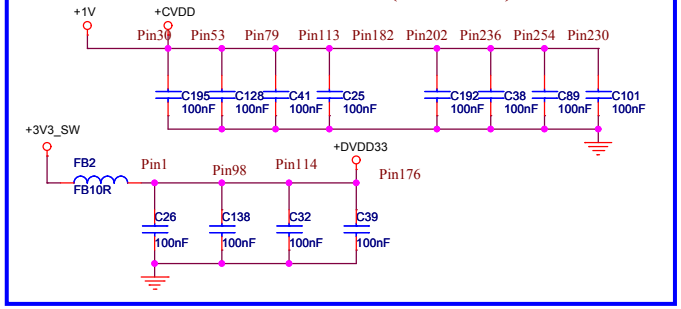


AUDIO POWER/GND (3.3V)

TMDS POWER/GND (1.0V/3.3V)

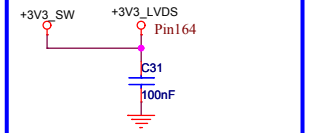


SOURCE POWER/GND (1.0V/3.3V)

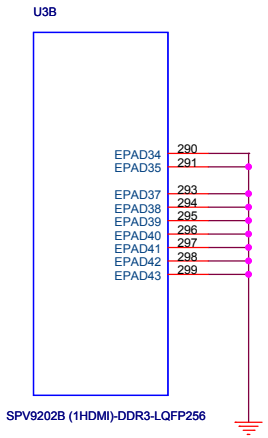


ALL FB except ADC, CVDD : need Rdc<0.2 , Z=300/100MHz , Idc>500mA
Default part : MCB2012S301H

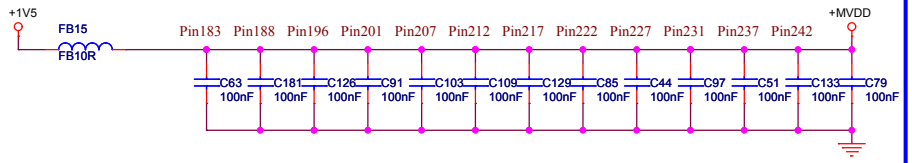
LVDS PWR



SPV9202E E-Pad

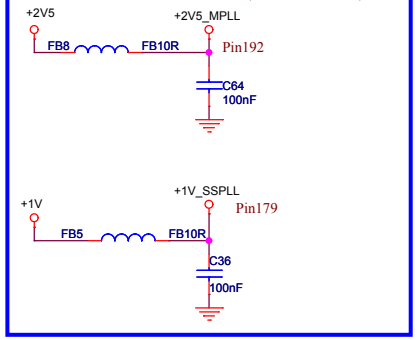


DDR-3 Power

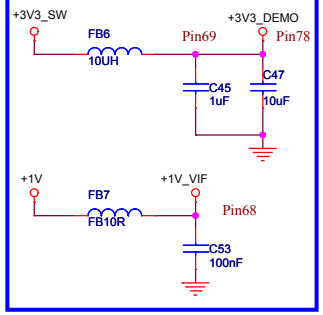


***Short these ground planes on PCB**

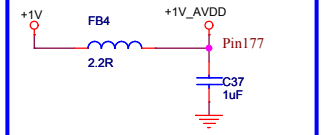
PLL POWER/GND (1.0V/2.5V)



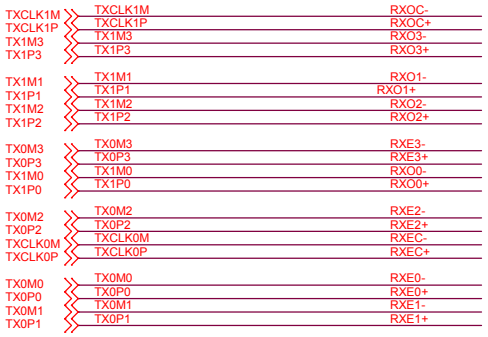
DEMO/VIF PWR

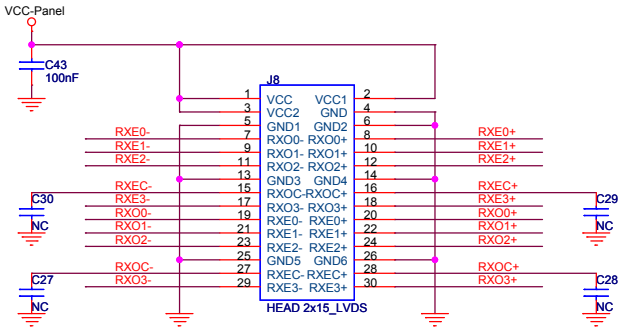


SYSTEM PLL

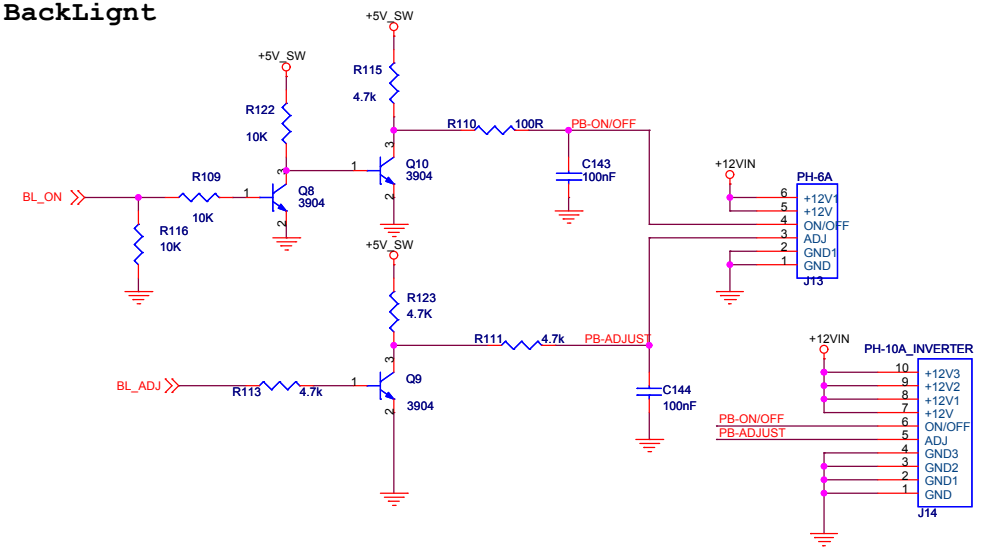


LVDS

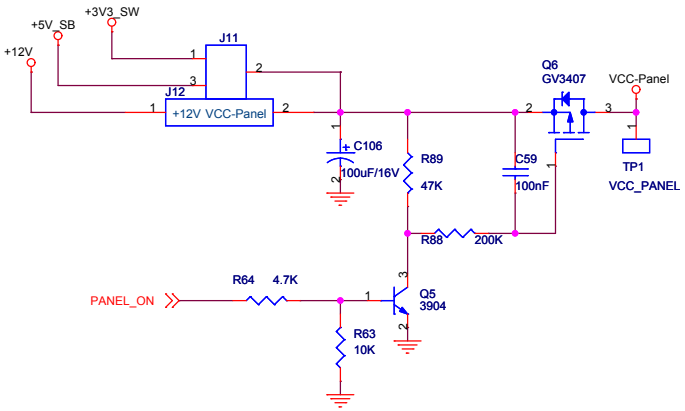


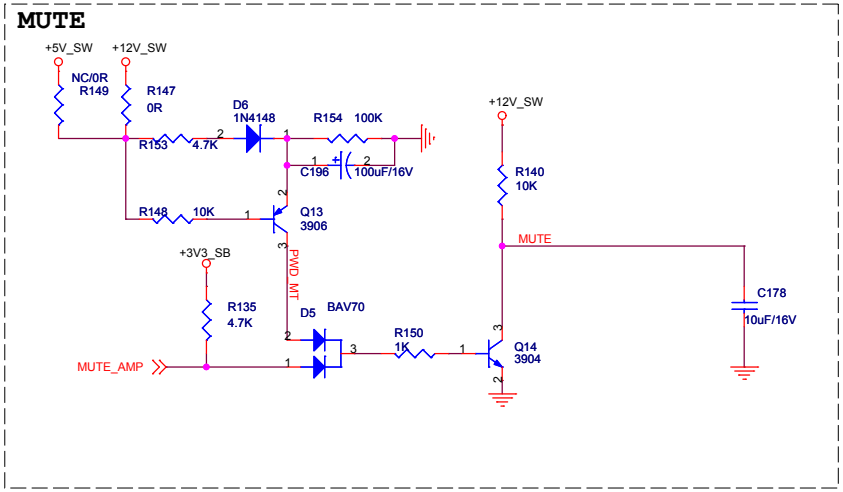


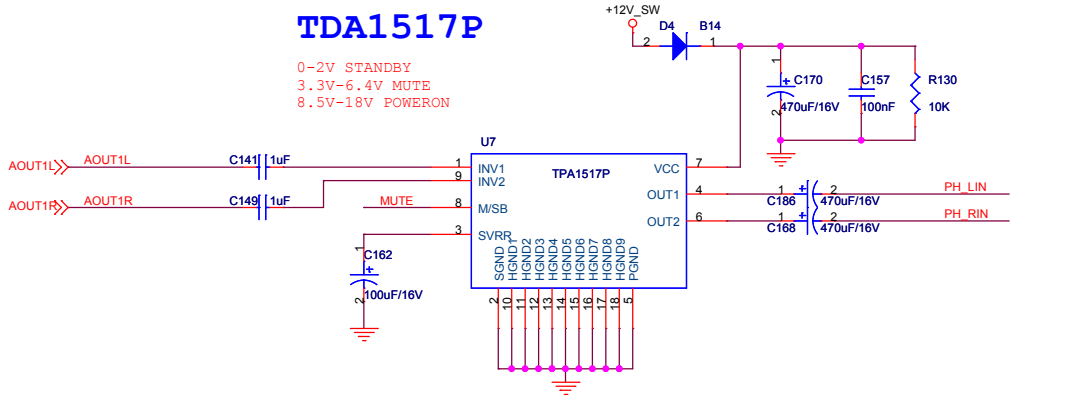
BackLignt

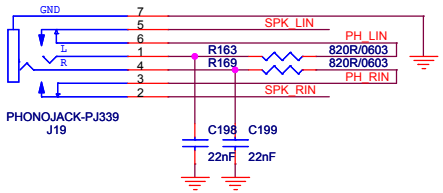


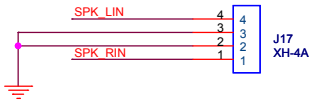
Panel Power

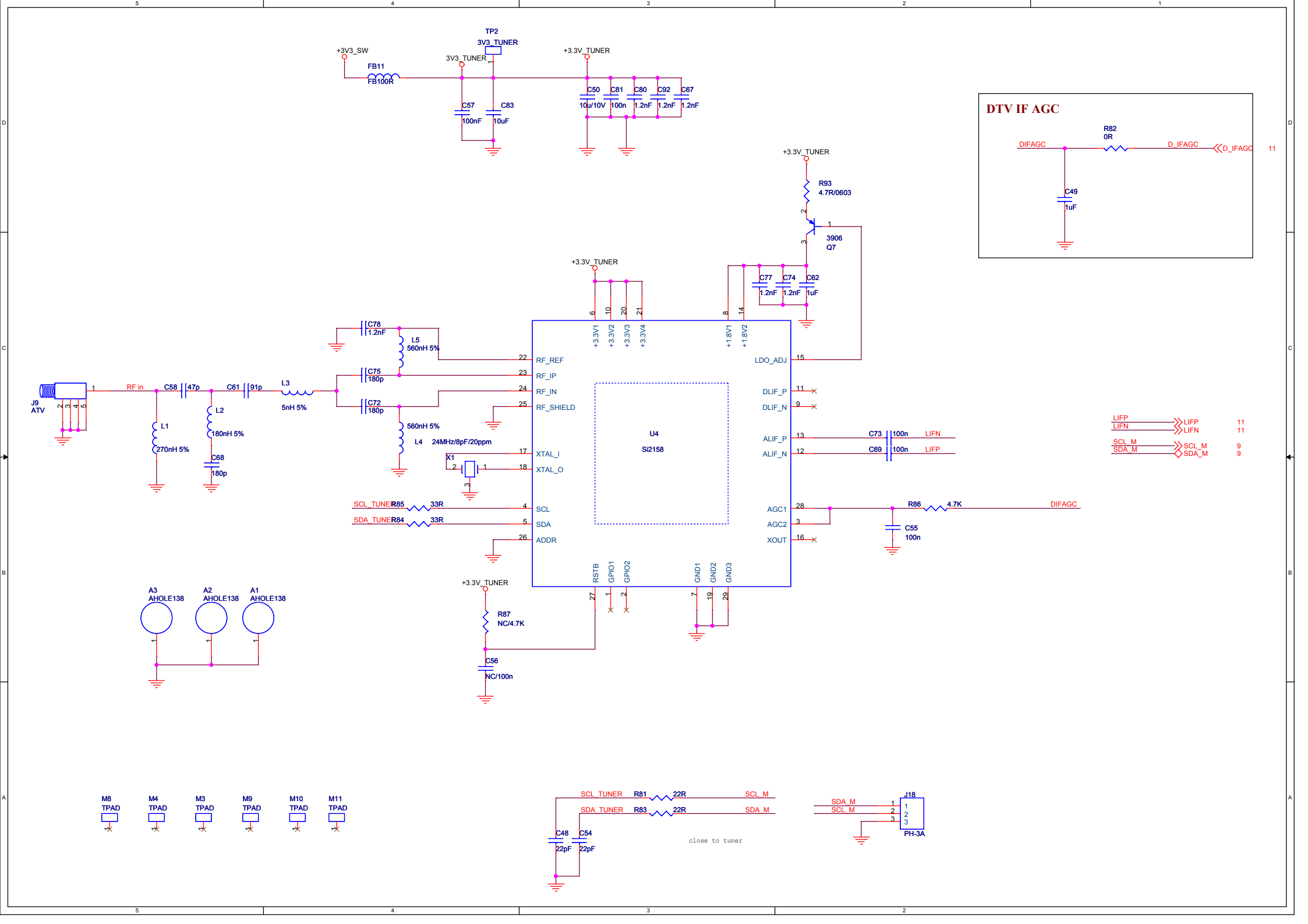



MUTE
+5V_SW
+12V_SW
NC/0R
R149
R147
0R
D6
1N4148
R154 100K
R153 4.7K
C196 100uF/16V
R148 10K
Q13
3906
PWD_MT
+3V3_SB
R135
4.7K
D5 BAV70
R150
1K
Q14
3904
MUTE_AMP
+12V_SW
R140
10K
MUTE
C178
10uF/16V

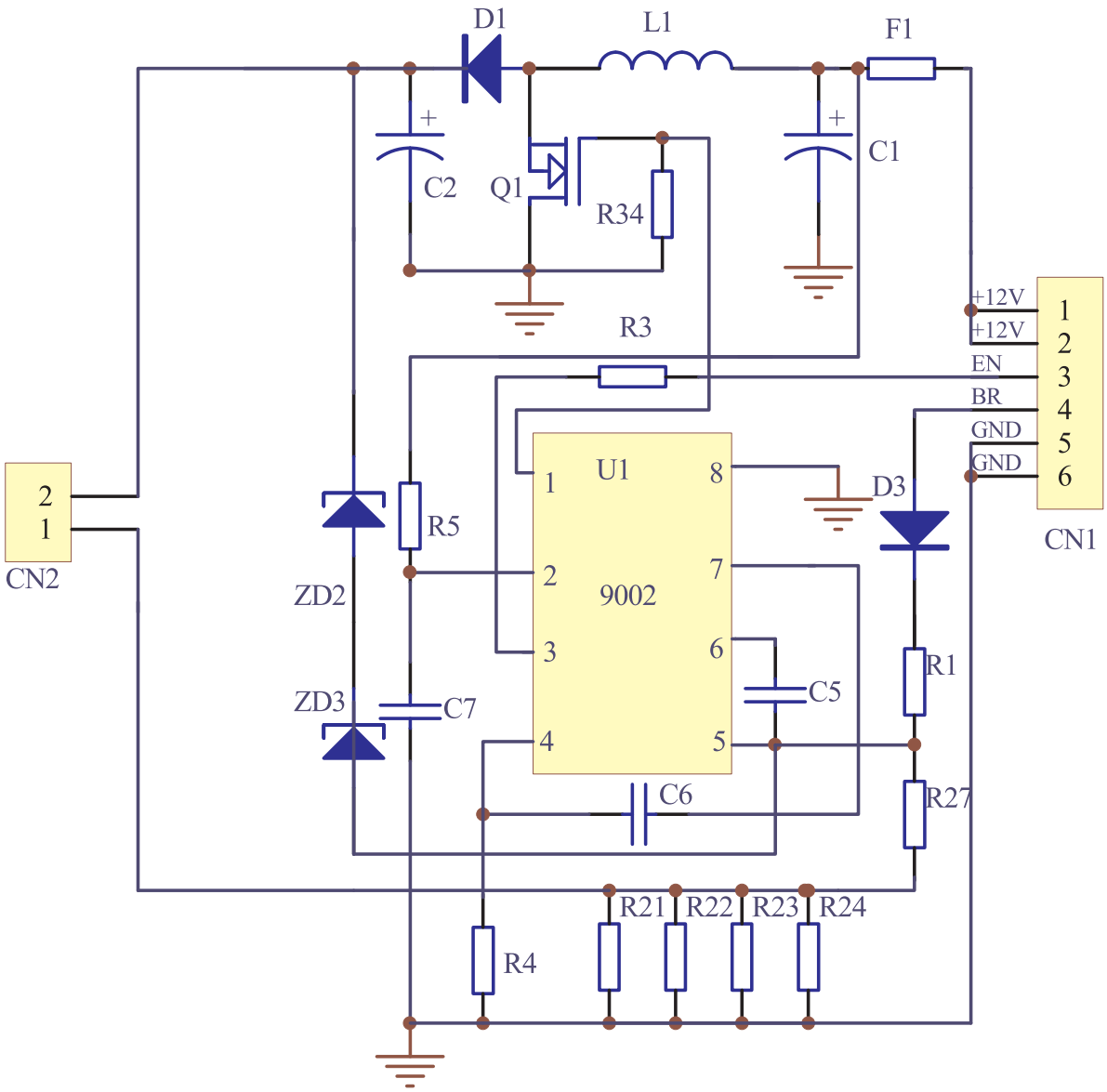

TDA1517P
0-2V STANDBY
3.3V-6.4V MUTE
8.5V-18V POWERON
+12V_SW
D4
B14
C170 470uF/16V
C157 100nF
R130 10K
U7
TPA1517P
AOUT1L
AOUT1R
C141 1uF
C149 1uF
MUTE
C162 100uF/16V
INV1
INV2
M/SB
SVRR
SGND
HGND1
HGND2
HGND3
HGND4
HGND5
HGND6
HGND7
HGND8
HGND9
PGND
VCC
OUT1
OUT2
C186 470uF/16V
C168 470uF/16V
PH_LIN
PH_RIN


GND
SPK_LIN
PH_LIN
R163 820R/0603
R169 820R/0603
PH_RIN
SPK_RIN
PHONOJACK-PJ339
J19
C198 22nF
C199 22nF


SPK_LIN
SPK_RIN
J17
XH-4A


TP2
3V3_TUNER
+3V3_SW
FB11
FB100R
3V3_TUNER
+3.3V_TUNER
C50 C81 C80 C92 C67
10u/10V 100n 1.2nF 1.2nF 1.2nF
C57 C83
100nF 10uF
DTV IF AGC
R82
0R
DIFAGC
D_IFAGC
D_IFAGC 11
C49
1uF
+3.3V_TUNER
R93
4.7R/0603
3906
Q7
C77 C74 C62
1.2nF 1.2nF 1uF
+3.3V_TUNER
+3.3V1 +3.3V2 +3.3V3 +3.3V4
+1.8V1 +1.8V2
C78
1.2nF
L5
560nH 5%
C75
180p
C72
180p
560nH 5%
L4 24MHz/8pF/20ppm
X1
RF_REF
RF_IP
RF_IN
RF_SHIELD
XTAL_I
XTAL_O
LDO_ADJ
DLIF_P
DLIF_N
ALIF_P
ALIF_N
C73 100n LIFN
C69 100n LIFP
U4
Si2158
LIFP 11
LIFN 11
SCL_M 9
SDA_M 9
J9
ATV
RF in
C58 47p
C61 91p
L3
5nH 5%
L1
270nH 5%
L2
180nH 5%
C68
180p
SCL_TUNER R85 33R
SDA_TUNER R84 33R
SCL
SDA
ADDR
AGC1
AGC2
XOUT
R86 4.7K
DIFAGC
C55
100n
A3 AHOLE138
A2 AHOLE138
A1 AHOLE138
+3.3V_TUNER
R87
NC/4.7K
C56
NC/100n
RSTB
GPIO1
GPIO2
GND1
GND2
GND3
M8 TPAD
M4 TPAD
M3 TPAD
M9 TPAD
M10 TPAD
M11 TPAD
SCL_TUNER R81 22R SCL_M
SDA_TUNER R83 22R SDA_M
C48 22pF
C54 22pF
close to tuner
SDA_M
SCL_M
J18
PH-3A

Inverter PCB Principle Diagram



Inverter PCB Principle Diagram